

REMARKS

Reconsideration and allowance in view of the foregoing amendments and the following remarks are respectfully requested.

Claims 1-3, 6, 10, and 12-16 remain pending in the present application. Claims 4, 5, 7-9, and 11 were cancelled in a previous Amendment.

Claims 1 and 10 stand rejected under 35 U.S.C. § 102 as being anticipated by U.S. Patent Appln. No. 09/875,648 to Brunamoti et al. (“the ‘648 application”)(Pub. No. 2001/0048079). In addition, claims 2 and 3 stand rejected under 35 U.S.C. § 103 as being unpatentable over the ‘648 application in view of published U.S. Patent No. 6,369,387 to Eckles (“the ‘387 patent”). Applicant respectfully traverses these rejections for the reasons presented below.

Independent claims 1 and 10 have been amended to define the sample cell as having a gas inlet disposed at a first end portion of the sample cell, a gas outlet disposed at a second end portion, a gas flow passage defined in the sample cell between the gas inlet and the gas outlet, where the gas inlet, the gas outlet, and the gas flow passage are disposed in a Z configuration. As before, at least a portion of a wall defining the gas flow passage includes an infrared reflective surface so as to direct rays of radiation from the source to the infrared radiation detector generally along the optical path through the gas flow passage.

An example, of a “Z” configuration for the flow of gas through the sample cell is shown in FIG. 9 of the application, as filed, and is described in paragraph [55]. A feature of the “Z” configuration is that the inlet and outlet path are not at a 90° angle with respect to the main gas flow path. The benefits of this “Z” configuration are that gas disturbances caused by gas passing through the sample cell, such as eddies, are reduced, and gas in the main gas flow path is rapidly and effectively “washed out” by new gas entering from the inlet passage. Thus, the measurement of the gas constituent in the main gas flow path represents the current gas passing through the sample cell. Thus, the sample cell of the present invention provides a relatively fast

“response time”. Applicant submits that the cited references do not teach or suggest a sample cell with a gas flow path having these features.

The ‘648 application includes a chamber 12 having a main gas flow path 18, an inlet 15, and an outlet 16. However, inlet 15 and outlet 16 are provided at a 90° angle with respect to gas flow path 18. Thus, the configuration taught by the ‘648 application is not a “Z” configuration. Applicant further submits that it would not be obvious to modify the device taught by the ‘648 application so that it has a Z configuration, because there is no teaching or suggestion in the ‘648 application for such a modification. The other cited references, including the ‘387 patent, do not teach or suggest such a modification and/or suggest that the device taught by the ‘648 application be so modified.

For the reasons presented above, applicant respectfully submits that independent claims 1 and 10 are not anticipated or rendered obvious by the cited references. In addition, claims 2 and 3 are also not anticipated or rendered obvious due to their dependency from independent claim 1. Accordingly, applicant respectfully requests that the above rejection of claims 1-3 and 10 be withdrawn.

Claims 6 and 12-16 stand rejected under 35 U.S.C. § 103 as being unpatentable the ‘648 application in view of published U.S. Patent Application No. 10/108,957 to O’Leary, publication no. 2002/0153490 (“the ‘957 application”). Applicant respectfully traverses these rejections for the reasons presented below.

Independent claims 6 and 12 have been amended along the same lines discussed above with respect to independent claims 1 and 10. Thus, the distinctions between claims 1 and 10 and the ‘648 application are equally applicable to claims 6 and 12. The additional citation to the ‘957 application is provided to establish that high numerical aperture lens are known in the art. This reference, however, does not provide a teaching or suggestion for using a “Z” configuration for the gas flow path through the sample cell.

For the reasons presented above, applicant respectfully submits that independent claims 6 and 12 are not rendered obvious by the cited references. In addition, claims 13-16, are not rendered obvious due to their dependency from one of independent claims 1, 6, 10, and 12.


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Accordingly, applicant respectfully requests that the above rejection of claims 1-3, 6, 7, 10, and 12 be withdrawn.

This response is being filed within the three-month statutory response period which expires on May 6, 2006. In addition, no additional claim fees are believed to be required as a result of the above amendments to the claims. Nevertheless, the Commission is authorized to charge the any fee required under 37 C.F.R. §§ 1.16 or 1.17 to deposit account no. 50-0558.

All objections and rejections have been addressed. It is respectfully submitted that the present application is in condition for allowance and a Notice to the effect is earnestly solicited.

Respectfully submitted,

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